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RECORD OF GEOGRAPHICAL PROGRESS.

NORTH AMERICA.

GLACIERS OF THE UNITED STATES.—Mr. H. F. Reid says, in his second paper on “Variations of Glaciers” (*Jour. of Geol.*, No. 4, Vol. 5), that the evidence collected by Prof. Russell in 1892 shows that, in general, the glaciers of the United States are retreating, though a few glaciers are in a state of advance. The Malaspina glacier on the south side of the St. Elias range is, on the whole, retreating, but a part of it near the Yahtse River advanced in 1886, destroying trees; and the southeastern part, near Point Manby, has recently advanced about 1,700 feet, and again retreated. Muir Glacier, Alaska, which has been receding for a century or more, made a temporary advance of about 1,000 feet between 1890 and 1892, but in 1894 it had again retreated to its limit of 1890. This oscillation refers only to the water front of the glacier, for the sides have been steadily retreating. Information concerning three of the twelve or so glaciers on the steep slopes of Mount Rainier [Tacoma], which are from three to six miles long, *viz.*, Carbon glacier on the northern, Willis on the northwestern and Nisqually on the southern face of the mountain, show that they are steadily receding. The eight glaciers on Mount Hood are steadily diminishing. More systematic observations of some of the Pacific slope glaciers will begin this year.

LAKES WITH TWO OUTLETS IN NORTHEASTERN MINNESOTA.—Mr. U. S. Grant, of Minneapolis, gives information (*Amer. Geol.*, Vol. XIX, No. 6), concerning these lakes in Cook, Lake and St. Louis counties, Minnesota, obtained while he was engaged in field work for the Geological and Natural History Survey of Minnesota. Brulé Lake (elevation, 1,851 feet), twenty miles north of Lake Superior, is over eight miles long east and west, and averages a mile in width. One outlet is at the east and the other at the west end. They are approximately equal in volume and flow over rocky beds. The eastern stream is the Brulé River, which runs east-southeast for forty miles to Lake Superior. The western stream enters the Temperance River and travels over thirty miles before reaching Lake Superior. The writer names eleven other lakes and describes their double outlets. After the withdrawal of the ice sheet there were left some basins in the drift, in rock or in both, in each of which the water accumulated till it overflowed the

rim of the basin. In a few cases a basin had two points in its rim of the same altitude and lower than any other point, and thus a double outlet to the lake was formed.

TWO EXPEDITIONS TO MOUNT ST. ELIAS.—Mr. Henry G. Bryant, of Philadelphia, the successful explorer of the Grand Falls of Labrador, who with his party started for Mount St. Elias from Tacoma, in the latter part of May, wrote to us before his departure: "We hope to be in the field early in June. My plans are to attempt the ascent of Mount St. Elias and Mount Logan. As you know, this latter peak is credited with a height of 19,500 feet. [Mount St. Elias, 18,023 feet.] The first party that carries a mercurial barometer to the top may modify some of the existing determinations of heights. Should we be favored with good weather conditions and succeed in making these ascents and a good map of the region, my plans include an advance into the region northwest of Mount St. Elias and a descent of the southern tributary of the Copper River. The valley of this river has never been explored."

Mr. Bryant is accompanied by Mr. S. J. Entrikin, who served under Mr. Peary (1893-94); by Mr. E. B. Latham, a Coast Survey officer detailed from Washington; by the guide of the Russell party of 1893, and several camp hands. The government has loaned the necessary instruments and pays the salary of Mr. Latham, and the other expenses are borne by Mr. Bryant. He is expected to attack St. Elias on the side of the Malaspina Glacier, south side of the mountain, towards which the most accessible face appears to be turned.

About the time that Mr. Bryant started north from Tacoma, Prince Luigi of Savoy, nephew of King Humbert, arrived in New York, with a number of experienced Alpine guides and Signor Vittorio Sella, the most eminent of mountain photographers. They lost no time in crossing the continent and taking a steamer for Sitka, where a sailing vessel was in waiting to carry the party to Mount St. Elias. The expedition was joined in America by Professor I. C. Russell of Michigan University, Professor C. E. Fay of Tufts College, and two or three other Americans. The party has an adequate supply of instruments and photographic apparatus. A good series of photographs by Signor Sella will be a distinct addition to our facilities for studying this region.

MR. MORRIS K. JESUP'S EXPEDITION TO THE NORTH PACIFIC COAST.—Dr. Franz Boas and Mr. Harlan I. Smith, of the American

Museum of Natural History, and Dr. Livingston Farrand, of Columbia University, have left New York for the North Pacific coast to begin the programme of ethnological study described in the *BULLETIN* (p. 68, No. 1, 1897), and supported at the expense of President Jesup.

SOUTH AMERICA.

DECREASING RAINFALL ON TRINIDAD.—The last Annual Report of the Botanical Garden on Trinidad, Lesser Antilles, says that the mean annual rainfall has slowly but steadily decreased for the past three decades and that in the period, 1882–91, the precipitation was only 60.82 inches a year, which is as much rain as falls in any part of the United States except on the eastern Gulf of Mexico and Northern Pacific coasts. The residents of Trinidad are alarmed at the decrease, and the report says that at the present rate of the diminution of rainfall it is easy to estimate how much time will elapse before the island will become a desert. The cause of the diminished rainfall is attributed to the destruction of forests.

THE MAP OF PERU.—In his last annual address before the Geographical Society of Lima, the president, Dr. Luis Carranza, said that in spite of the financial disturbances in that country, funds had been found for the completion of the great map of Peru, the material for which is the result of the long labors of Señor Antonio Raimondi. Sixteen sheets had been published when the work was brought to a pause by the political difficulties of the country, and the consequent impossibility of obtaining money to pursue it. Since the resumption of the work, seven sheets have been completed, five have been sent to Erhard of Paris to be lithographed, the drawing of two others has been completed, and the drawing of Nos. 30, 31, and 32 is under way. The able cartographer Baluarte has charge of the production of these sheets, and No. 32 will complete this very important addition to the maps of South America. (*Boletín* of the Geographical Society of Lima, 3d Trim. Vol. VI.)

THE ASCENT OF MOUNT ACONCAGUA.—Dr. FitzGerald, fresh from his explorations in the New Zealand Alps, set out from England in October last, under the auspices of the Royal Geographical Society, with several scientific assistants and Alpine guides, including Zurbriggen, for South America, to undertake the ascent of Mount Aconcagua and the scientific exploration of that district in the Cordilleras. On Dec. 23, with four men and ten pack mules, he reached the Aconcagua slope and began the ascent. In three days he

attained the height of 19,000 feet amid many difficulties, that were intensified by extreme cold and a snow storm. Zurbriggen pushed on and at a height of 21,000 feet found a tin box containing a map, dated March, 1883, which Dr. Güssfeldt had lost during his ascent. The party was compelled to descend on Dec. 27, as the cold continued and it was not possible to prepare warm food. The second attempt on the mountain began on Dec. 30, but the summit was not reached. Owing to the very low temperatures the party retreated after attaining a height of 22,500 feet. The cold was still intense when the third ascent began, on Jan. 9, but four days later camp was pitched at a height of 20,000 feet and, on the following day, the explorers reached the arête between the peaks of Aconcagua at a height of 23,000 feet. Mr. FitzGerald, on account of illness, was unable to proceed beyond this point, but Zurbriggen pressed on, and at 5 P.M. reached the summit at a height of over 24,000 feet, the highest elevation yet attained by any mountain climber. Mr. Vines, the geologist, also reached the summit on Feb. 13, after a journey of nine hours. He says the slope of Aconcagua is porphyritic and has a thick covering of argillaceous earth which cannot sustain vegetation. The south side is broken up into peaks.

DR. HERMANN MEYER'S XINGU EXPEDITION.—In May, last year, Dr. H. Meyer started from Cuyabá, the capital of Matto Grosso, Brazil, to visit the Indian tribes in the upper part of the Xingu Basin. After a long march northward over the Chapada plateau the Paranatinga River, which flows into the Tapajos, affluent of the Amazon, was reached and ascended by boat to the Bakaïri River whence a three weeks' land march led to the Jatoba. On July 28 the expedition, fifteen men strong, started down the river in seven bark canoes, passing on the way three large water-falls and more than 100 rapids, among which some boats were wrecked and the supplies they contained were lost. On Aug. 16, the explorer entered the Ronuro, which he proved to be the chief source of the Xingu, and a week later, met the first Indians, the Kamagura, who were fishing at the confluence of the Ronuro and Kuluene. They gave the visitors a friendly reception. A journey up the Kuluene to the town of the Trumai tribe was made, and then Dr. Meyer began his chief work, the study of the numerous Nabuqua Indians living between the Kuluene and the Kulisehu. This work was accomplished in a satisfactory manner, and then the party descended the Kuluene to its confluence with the Kulisehu, which was ascended on the way back to Cuyabá, that town being reached on Dec. 2.

The only very serious mishap was the accidental discharge of a gun, on Oct. 1, by which Dr. Ranke lost his left eye. The results are large ethnological collections, vocabularies and photographs from the tribes visited, careful geographical route surveys and much minute information relating to the unknown tribes of the upper Xingu territory. (*Geogr. Zeitsch.* No. 4, 1897.)

Dr. von den Steinen, who explored the Xingu in 1884 and 1887, did not clearly solve the problem of its sources. He discovered the Batovy affluent of the Ronuro and the Kulisehu tributary of the Kuluene. The relative importance of the Ronuro and the Kuluene remained to be determined, and Dr. Meyer has ascertained that the Ronuro is undoubtedly the true source of the Xingu and that the Kuluene is a much less important stream.

EXPEDITION TO THE GALÁPAGOS ISLANDS.—The biological expedition to the Galápagos Islands, headed by Mr. C. M. Harris, of Augusta, Me., sailed from San Francisco on June 21, to be gone seven months. Associated with Mr. Harris are Professors Hall of Dartmouth College, Drowle of Brown University and Beck, the ornithologist, of California. The purpose is to collect and study all the forms of plant and animal life. These islands, which lie under the equator west of Quito, are poor in fauna and flora, but both are very interesting on account of their relations with those of the continent, and their dissimilarity to those of other Pacific islands, which has led to the theory that the islands may once have been united with the mainland.

EUROPE.

A NEW TOWN NEAR THE ARCTIC OCEAN.—The Russian Government is carrying out its scheme, approved some time ago, to build a new town on the Murman (Russian Lapland) coast of the Arctic Ocean near Yekaterinen-Haven. Mr. Blom Olsen, a civil engineer, whose specialty is harbor improvements, is in charge of the work. In August, last year, he had twenty men on the site of the proposed town making piers for the shipping and doing other pioneer work. Fifty wooden buildings were constructed at Archangelsk, last winter, and are to be removed to the new town this summer. It is the intention to abandon the town of Kola at the head of Kola Bay, and transfer the residents to the new town, which has been named Yekaterinograd. It is nearer the sea than Kola, and is, therefore, better situated for the convenience of the 1,500 fishermen who are engaged on that coast every summer.

THE HIGHEST ALPINE VILLAGES.—The loftiest village in Switzerland is Inf in the valley of the Avers, 6,996 feet above sea-level. In Italian territory, south of Monte Rosa, Rery is 7,055 feet above the sea and its inhabitants live at that elevation the year round. The village of Trepale (Italian) in the Val Livigno is 6,771 feet above sea-level. Avérol (elevation 6,661 feet) and Saint-Véran (elevation 6,628 feet) are both in the French Savoy. (*Deutsche Rundschau für Geog. und Statistik*, No. 5, Vol. xix.) All of these villages are higher above the sea than the summit of Mount Washington.

EXPLORATIONS IN ICELAND.—Four explorers were engaged in various researches in Iceland last year. Mr. Thoroddsen, the most assiduous explorer of Iceland, continued the work to which all his leisure time, for twelve years, has been devoted. Last summer he was engaged on the peninsula of the north coast between the Oe fiord and the Hunafloi, and thence worked southward with much difficulty across the highland to the glacier-covered Hofs Jökull, in the centre of the island, where he discovered some lakes not hitherto known, two large lava streams and the sources of the Thorsa, the largest river of the island. This year he will make a journey across the island to complete the collection of material for his geological map, and he intends to write a work on the results of his studies of volcanic phenomena in Iceland. Lieutenant Garde, of the Danish navy, made a survey of Hvammsfiord, a branch of the large Breidfiord, on the west coast, where it is proposed to establish a harbor. Lieut. Brunn made a careful examination of the remains of the first Scandinavian settlements in Iceland and established their similarity to the Norse remains in Greenland. The Danish Deep Sea Expedition under Captain Wandel added new facts to our knowledge of the coast and coast waters of the island, already referred to in the BULLETIN (p. 80, No. 1, 1897).

COMMERCE IN THE KAISER WILHELM CANAL.—During the first year after the opening of this canal, connecting the waters of the North and the Baltic seas, 7,531 steamers engaged in commerce and 9,303 sailing vessels passed through it; also 266 German and 2 foreign warships. The German vessels numbered 6,480 steamers and 8,477 sailing craft. The receipts from tolls were: steamships, \$136,165; sailing vessels, \$43,125; total, \$179,290.

THE XII GEOGRAPHENTAG, JENA.—The Deutsche Geographentag, or Congress of German Geographers, was first held in 1881, at

Berlin. It met annually until 1887, and since then the meetings have taken place once in two years. The objects are, in the main, educational and social, and these German meetings are distinguished from the annual gatherings in Section E of the British Association and from the annual reunion of geographical societies in France by the preponderance of the University and educational element. The attendance at Jena this year (April 20-23) was above the average, there being nearly 600 members and associates present. Foreign geographers are naturally attracted by these scientific gatherings, and eleven nationalities besides German were represented at the Jena Congress. It is learned from F. P. Gulliver's article on the Congress (*Science*, June 4), that Dr. G. Neumayer, of Hamburg, who presided, did not indicate in his address that the Commission on South Polar Exploration, appointed at the Bremen meeting in 1895, had reached practical results in the effort to place a German expedition in the Antarctic area, but the way is being prepared for work in that poorly mapped region. Kerguelen Island is the proposed base for a German expedition, and the money required for two seasons' work is about \$200,000.

Three papers on new explorations illustrated the fact that the long journeys of the earlier explorers are being superseded by more thorough methods of research, the modern traveller studying in more detail a small area or taking up a special problem in a larger district. This was particularly the case with the paper of Dr. Hermann Meyer, of Leipzig, describing his careful ethnological studies in the Xingu Basin, central Brazil. The other papers on exploration were "German Investigations in Asia Minor" by Dr. Heinrich Zimmerer of Munich; and a "Journey through Syria and Anatolia in 1895" by Roman Oberhummer.

Notwithstanding the fact that Germany leads in geographical education, Prof. Fischer of Berlin convinced his audience that there was reason for immediate efforts to improve geography teaching in Prussia. Prof. Dr. W. Sievers outlined excursions with students to teach them geography by a closer examination of typical forms. He suggested for the Universities of middle Germany three trips in successive years, first to the sea-coast, second to the highland, and third to the Alps. Prof. Dr. J. Palacky, of Prague, said herbariums should be arranged according to the geographic distribution of plants, for teaching geographic botany.

Among other features was a discussion of earthquake problems led by Prof. Gerland of Strassburg and Dr. Supan of Gotha. Dr. Supan outlined a plan for the more systematic observation and

recording of earthquakes. Several interesting papers were read on biologic geography, and Dr. E. Hahn of Lübeck showed the marked geographic control exhibited in the distribution of the various beasts of burden throughout the world. A description of the present forms of the elevated mass of the Thüringerwald, by Prof. Dr. J. Walther, was the only physiographic paper read, and mathematical geography was also represented by one paper: "The shadow cast by mountains and its effect in the Alps and in the Mountains of Central Europe," by Dr. K. Peucker of Vienna. The next place of meeting will be Breslau.

THE SEVENTH INTERNATIONAL GEOLOGICAL CONGRESS. — This Congress will be held at St. Petersburg from Aug. 28 to Sept. 4, and will be attended by a number of American geologists. The topics before the Congress will include the reports of committees on the unification of geological nomenclature, the production of a geological map of Europe, glacial phenomena, petrography and bibliography. The committee on bibliography, with the French geologist M. Emm. de Margerie as secretary, has already issued a valuable volume. The Russians have arranged for the entertainment of their guests on an unprecedented scale. A number of geological excursions have been outlined for the days preceding and succeeding the session of the Congress, two of which are 2,300 and 2,700 miles in length, the one extending to the Ural Mountains and the other to the Caspian and the Black seas. These facilities, the Committee distinctly announces, are not extended to persons who have not made themselves known by geological publications.

GEOGRAPHICAL INSTRUCTION IN THE GERMAN-SPEAKING COUNTRIES. — The pre-eminence in geographical education of those parts of Europe where the German language is the mother tongue is well illustrated by the summary in *Petermanns Mitteilungen* (No. IV, 1897), showing the topics, geographical or related to geography, such as geology, climatology, etc., treated in the universities and upper schools during the summer term, this year. The professors and instructors in geography gave lecture courses in seventeen of the universities of Germany and the technical schools of Darmstadt, Dresden, Munich and Münster; in five universities of Austria and the technological school of Vienna; and in three universities of Switzerland and the technical school at Zürich. The programme at the University of Berlin was no larger nor more varied than that

in a number of other institutions, and it is appended here as a specimen of the work of one semester:

Prof. von Richthofen—(1) Geography of the Russian Empire in Europe and Asia. (2) Geographical Discussions.

Prof. Dr. Dove—(1) Geography of Africa. (2) Colonial Industrial Enterprise, particularly in relation to the German Protectorates.

Prof. Dr. K. Kretschmer—The Historical Geography of Germany.

Prof. Helmert—(1) Theory of Map Projections. (2) Determination of Heights.

Prof. Dames—Geology of the North German Plain.

Prof. Dr. Jaeckel—Geology of Germany.

Prof. Dr. von Bezold—Theoretical Meteorology (Statics and Dynamics of the Atmosphere).

Prof. Dr. Assmann—Outlines of Meteorology and Climatology.

Prof. Dr. von Luschan—(1) Physical Anthropology. (2) Ethnology and Anthropology of the Pacific Islanders with special reference to the German Protectorates. (3) Exercises in Anthropology and Ethnology.

Prof. Böckh—Theory of Statistics.

Prof. Meitzen—Statistics of the German Empire.

AFRICA.

PROBLEM OF THE OMO RIVER.—Count Eduard Wickenburg of Austria sailed for Aden on March 20 to engage in explorations for two years in north-east Africa. He has an ample equipment and expects to organize a large expedition in Shoa and have the support and assistance of King Menelek. This is a sanguine view of his prospects, unless Menelek's coöperation has already been guaranteed. The Abyssinians and their king have recently demonstrated their hostility to exploratory enterprises in their territory proper and the parts of Galla Land they have conquered. They turned back Dr. Donaldson Smith (1894), who was compelled to seek a route south of King Menelek's sphere of influence; and meagre reports of the massacre of the second Böttogo expedition, either by one of Menelek's chiefs, or by Galla natives under his control, are at hand. Count Wickenburg hopes to solve the problem of the Omo River, whose destination is still unknown, though its course has been traced for 150 miles in its upper part. It has long been supposed to be identical with the Nianam emptying into Lake Rudolf, but Dr. Donaldson Smith ascended that river for 100 miles and believes it has no connection with the Omo. The Austrian explorer's plans also embrace a traverse of the unknown region between Lake Rudolf and Victoria Nyanza.

HEALTH CONDITIONS IN NYASSA LAND.—Although this region is regarded as one of the most healthful of inner tropical Africa, the mortality among the white residents for the year beginning March, 1895, was unusually large, owing to an epidemic form of malaria. Twenty-eight persons died among 275 white residents. Still the Protectorate is making rapid progress. The exports, consisting

chiefly of ivory and coffee, increased from \$48,520 in the previous year to \$98,345.

FIXING THE SAHARAN SAND DUNES.—Efforts to restrain the drifting sands of the Algerian Sahara are making on a somewhat larger scale and with continued success. According to ancient Greek and Roman writers and Arabian geographers, many oases in the Sahara were formerly five times as large as they are to-day. Gradually they have been encroached upon by wandering sand dunes which have destroyed the fertility of large parts of them. The French military authorities have given much study in Aïn-Sefra, Wargla and El Golea, for several years to methods of curbing this destructive tendency. They find that some forms of vegetable life can be made to grow in the desert wastes and have the effect, in large measure, to fix the sand dunes in position. Nurseries for raising the desired plants are maintained in Aïn-Sefra and El Golea. The ground where the plants are set out is first covered with a litter of alfa grass, which prevents the sand from overwhelming the small growths before they have been able to establish themselves. Among the plants experimented with have been the peach tree, aspen, Italian poplar, weeping willow, grape vine, cane brake and Spanish broom. The poplar appears to be particularly adapted to fix the sand in place and every year is adding a considerable area to the regions thus treated.

GOLD IN AFRICA.—The output of the mines in the Witwatersrand gold field, for 1896, was 2,281,874 ounces, which was 4,239 ounces more than in 1895.

Alluvial gold has been found in many places in Ashanti. Europeans come across many deserted holes which the natives have worked for gold to the convenient depth of three feet or so. In the hills and higher lands there is quartz which has been pronounced promising. The climate is a serious obstacle to opening mines by foreigners. Gold dust may be bought at £2 an ounce at Bona, in the interior, and sells at £3, 12s., 6d., on the coast. (Major C. Barter in the *Scot. Geog. Mag.*, Sept., 1896.)

PROGRESS OF THE CONGO RAILROAD.—On April 19 the railroad bridge over the Inkissi affluent of the lower Congo was completed. The last large stream on the way to Stanley Pool has been bridged and trains are running to the Inkissi, 171 miles from the starting point at Matadi. Just twenty years, lacking four days, before the completion of this bridge, Mr. Stanley discovered the Inkissi dur-

ing his boat journey down the Congo. It was in this region of cataracts that he found his greatest impediments and he was five months, from March 16 to Aug. 9, 1877, crossing the difficult region between Stanley Pool and Boma, fifty miles from the sea. More than half of this distance is now covered in twelve hours' travel on the railroad, and next year, when the railroad will be completed to Stanley Pool, the entire distance may be traversed in a day. There are now forty-five steamboats and a large fleet of tow-boats afloat on the 7,000 miles of navigable waters of the Upper Congo. (*Le Mouvement Géographique*, No. 20, 1897.)

THE GOBI NOT A DESERT.—Mr. W. Obrutscheff, in his book "Aus China," treats at length of the physical features of the Gobi, and brings much evidence to show that this vast region is not a desert, like the African and Arabian wastes to which it has often been compared, but is a plateau with all the characteristics of a steppe. Once a part of the sea-floor, its many hills and valleys are the result of long erosion since its elevation. Atmospheric precipitation fails in no part of the Gobi, and though the quantity of rain or snow is not large, it suffices, in most years, to produce a good growth of grass. The caravan route to Urga is traversed every year by 100,000 camels with their loads of tea, and the wells in this most barren part of Mongolia are usually not more than twenty to thirty miles apart. The wandering Mongolians have large herds, and only in the driest years have they any difficulty in finding sufficient quantities of fodder. The author says that only in certain areas does the Gobi approach the character of a desert, and even these regions do not compare in barrenness and lack of water with the deserts of Africa, Arabia, the Tarim Basin and the Ala-Schan. (*Deutsche Rundschau für Geog. und Stat.*, No. 8, Vol. xix.)

THE DEPRESSION BELOW SEA-LEVEL NEAR LUKTSCHAN.—The barometrical observations by Mr. Roborovski in the neighborhood of Luktschan (in east Turkestan, south-east of Turfan) fully confirm the report by the Grum-Grijmailo brothers in the first volume of their "Reise im westlichen China," of the depression below sea-level at this place. From their barometrical observations Gen. Tillo computed that the depression was 184 feet below sea-level. (*Geographische Zeitschrift*, No. 3, 1897.)

THE WALLACE LINE.—Mr. Martens has added further proof that the Wallace Line, between the islands of Bali and Lombok, does not mark a sharp division between Asian and Australian types of animal

life. Of ten varieties of mollusks collected on the Island of Lombok, three are geographically neutral, four are among the fauna of the Sunda group, while three belong to the eastern side of the line. Thus the transition has no sharp boundary, but is very gradual. (*Geog. Zeitsch.*, No. 3, 1897.)

THE POLAR REGIONS.

MR. R. E. PEARY'S FUTURE ARCTIC WORK.—It was announced on May 25 that the Navy Department had given leave of absence for five years to R. E. Peary, C. E., U. S. N., to carry out the plans for north polar research which he outlined in his address before the American Geographical Society on January 12 (*Bull. Amer. Geog. Soc.*, pp. 117-120, No. 1, 1897). The necessary funds have been secured to enable Mr. Peary to devote the time necessary, within the above limit, to the delimitation of the archipelago north of Greenland and the elimination from the maps of the blank space between the eighty-fourth parallel and the pole. Mr. Peary will start for north-west Greenland early in July to obtain the large meteorite on the coast of Melville Bay, and he will then engage the Eskimos whom he will take north with him in the summer of 1898, when his main work will begin. They will thus have a year in which to provide a stock of furs and other Arctic supplies for the more northern work. Mr. Peary will be accompanied north this summer by a party under the direction of Mr. Russell W. Porter, who will make explorations in Baffin Land. A party from Colby University (Waterville, Me.) will also go north with the explorer.

THE FORMER ESKIMO OF SCORESBY SOUND.—The exhaustive report on the work of the Danish expedition to East Greenland (1891-92), led by Lieutenant C. Ryder, fills Vols. xvii, xviii and xix of the *Meddelelser om Grønland*, published at Copenhagen, last year. The results are summarized in *Petermanns Mittheilungen* (pp. 86-95, No. 4, 1897), with a geological map of Scoresby Sound on a scale of 1:1,500,000. The chief purpose of the expedition was to survey the unknown coast between Scoresby Sound and Angmagssalik, to the south, where Holm found, in 1884, in about 65° 40' N. Lat., the most northern Eskimo settlements on the east coast. Ryder was not able to map this unsurveyed coast line, but his very complete scientific studies in the Scoresby Sound region, his headquarters for nearly a year, entitle his researches to a place among the important Greenland explorations. Scoresby Sound is over 300 miles north of the nearest east coast settlements, but the Eskimos formerly lived

much further north on that coast, and Ryder made a careful study of the ample evidences of their former residence in Scoresby Sound. He found many house ruins, graves, kitchen-middens, etc., particularly on Cape Stewart, South Cape in Northwest Fiord, Reindeer Cape in West Fiord, and Denmark Island. He found the ruins of fifty winter houses in seven different locations, numerous tent rings, formed by large stones laid in a circle, marking the places of the summer tents, and the remains of dog sledges, bows and arrows, fox traps, harpoons and other food-catching implements. These natives lived essentially in the same way as those of Angmagsalik and the west coast at the present day, except that their small houses were intended for only one family, while the winter dwellings south of their former abode are built for several families. They were not so advanced as the Angmagsalik natives are in the art of making and adorning their various manufactures. Ryder believes that they did not die out, but removed further south, and were the ancestors of the existing east coast natives. This view is supported by the fact that nearly all the objects found had evidently been worn out or broken and thrown away as useless. He believes the period when Scoresby Sound was inhabited may date several centuries back, and his observations tend to strengthen the theory that these natives were probably derived directly from North American Eskimos who crossed the archipelago and North Greenland to reach the east coast. The fashioning of their implements seems identical with that of the Point Barrow Eskimos, and they appear to have been more closely connected with the north-western branch of the family than with the central Eskimos of West Greenland.

MR. S. A. ANDRÉE'S BALLOON VOYAGE.—Mr. Andrée and his party sailed from Gothenburg (Göteborg), Sweden, on the Swedish gunboat *Svenskund*, on May 18, for Danes Island, Northwest Spitzbergen, about 700 miles from the North Pole, to make the second attempt to cross the unknown polar area by balloon. The balloon and most of the equipment was forwarded by the steamer *Virgo*. Mr. Andrée hoped to complete the inflation of his airship, in the balloon shed he built last year, by June 20, and if necessary, he will wait till early in August for the essential southern wind, whose failure to come defeated his plans last year. His balloon was somewhat enlarged in Paris last winter, its present capacity being 170,000 cubic feet, more space for gas being desirable, as the three thicknesses of silk, of which the balloon is made, proved heavier than the estimate. As the *Jeannette* and *Fram* expeditions covered so much of the Asian Arctic area, Mr. Andrée prefers, if

possible, to cross the unknown area and emerge on the American side. He believes that with his adjustable sail and guide ropes dragging on the ice he can, if he desires, divert the balloon, on an average, 27° from the direction of the wind, and thus have his airship, to an important degree, under his control. His companions are Mr. Nils Strindberg, who was with him last year, and Mr. Knut Fraenkel, a civil engineer. Mr. G. W. E. Svedenborg, an artillery officer in the Swedish army, will be one of the voyagers in case either of Mr. Andrée's comrades is prevented from making the ascent.

ANTARCTIC EXPLORATION.—Lieutenant de Gerlache will sail from Antwerp about July 15 for Antarctic waters on his steamer *Belgica* (*Bulletin*, p. 403, No. 4, 1896). He is equipped for three years' absence, but the results of his work are likely to be much curtailed by the fact that he intends to return to Melbourne for the winter seasons instead of wintering in high southern latitudes, ready to seize the first opportunity in the spring to advance his work. He plans in the approaching summer of 1897-98 to advance south of Graham Land on the American side of the Antarctic area, and in the following season, starting from Melbourne, he will endeavor to reach Victoria Land. This expedition has purely scientific objects and an adequate staff.

At the annual meeting of the Royal Geographical Society on May 17 last, the president, Sir Clements Markham, said that the Admiralty had informed the Society that a scientific expedition to the Antarctic Ocean under naval auspices could not be despatched. The president added that this service must now be undertaken by the Society or be left undone. The Society had decided to organize an expedition, and an appeal for funds would be made to equip the party on an adequate but not an extravagant scale.

The highest point attained in south polar waters (Ross, 1842) is about 817 statute miles from the South Pole. About the same distance from the North Pole a small house has been erected, on the west coast of Spitzbergen, and an excursion steamer, this summer, is carrying tourists to this point. Dr. Supan refers to the fact (*Petermanns Mittheilungen*, No. 1, 1897), that the wholly unknown Arctic area is now not larger than European Russia, while the wholly unknown Antarctic regions are twice as large as Europe; and that the geographical knowledge of Antarctica now occupies just about the same position as the world's knowledge of the Arctic regions at the end of the sixteenth century.

GENERAL.

The sale of the topographic sheets as well as the geologic maps and atlases of the United States Geological Survey to the public has recently been authorized. They are now sold at five cents apiece for small orders, and at two cents apiece for orders of 100 sheets or more. At these low prices they are brought within easy reach of teachers and others who desire to study them.

The Patron's Medal of the Royal Geographical Society has been awarded to Dr. George M. Dawson, Director of the Geological Survey of Canada, for his geographical explorations in the Northwest Territories and other parts of Canada and for the encouragement he has given to geographical work on the part of the Survey officers.

Cornell University has undertaken, through its Agricultural College, to assist teachers and parents interested in nature study, by distributing, free of charge, leaflets giving instructions how to make accurate observations of common objects.

J. Scott Keltie, LL.D., will be president of Section E (Geography) of the British Association for the Advancement of Science, which will meet in Toronto in August. Among the other officers of the section will be H. R. Mill, D. Sc., Major L. Darwin and Mr. E. G. Ravenstein, all of whom are expected to attend the meeting. These gentlemen are conspicuously identified with the Royal Geographical Society.

The bodies of the two missing explorers, C. F. Wells, second in command of the Calvert expedition in West Australia, and Mr. G. L. Jones, the geologist of the party (*Bull. Geog. Soc.*, p. 78, No. 1, 1897), have been found in the great waste which the party were exploring. They had not been killed by the natives, as was surmised, but died of their privations.